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# FARM INDEX

June 1970

**Pickens' Private War  
on Poverty**

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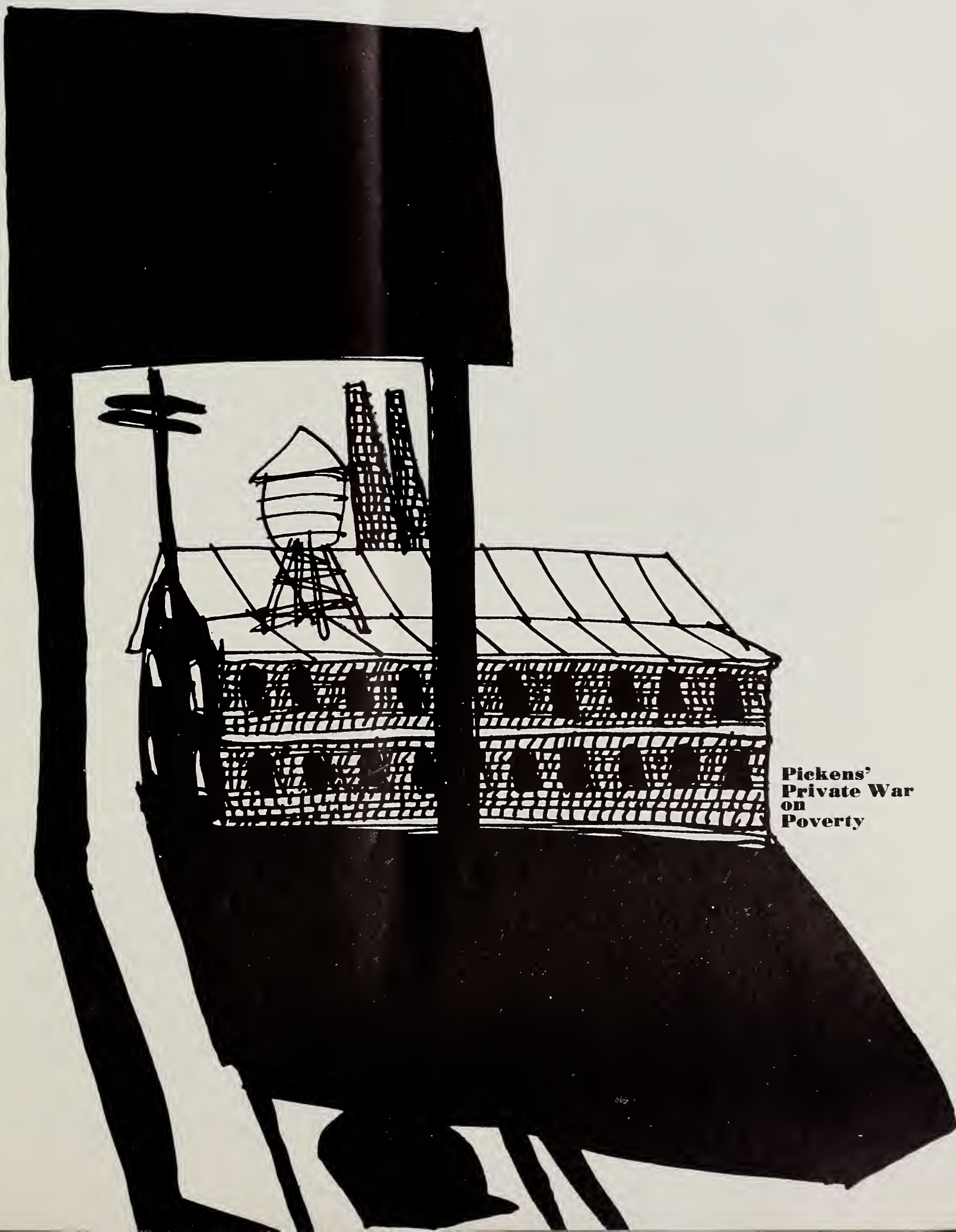
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**Pickens'  
Private War  
on  
Poverty**



## THE AGRICULTURAL OUTLOOK

Observations from the cookout-lookout indicate no lack of beef for the barbecue nor oil for the salad. Soybeans and livestock continue to show up strong in the agricultural scene.

**View From the Feedlot.** Feeders figure their April-through-June marketings of fed cattle will be up 6 percent from a year ago. (The sharpest increases will be in the West, where feeders had 9 percent more cattle on feed in April than they had a year earlier.)

*Fed beef output* will probably show more of a rise than the number of fed cattle marketed. Reason: Market weights have been generally heavier this year than last, and this trend is expected to continue. Average weight of steers marketed out of feedlots for slaughter in March '70 was 1,162 pounds vs. 1,103 pounds in March '69.

*Prices* at Midwest markets are expected to strengthen through June (though not up to last June's peak of over \$35) and continue on a strong tone this summer. Western markets will probably reflect less of this strength than other areas. Reduced supplies of pork and nonfed beef—coupled with consumers' unabating demand for meat—will help bolster fed cattle prices in the next few months.

**Soybean Highlights.** From a total demand aspect the soybean picture continues bright. It is dazzling, in fact, to oldtimers who can remember USDA's first soybean crop report.

*Way back then, when the year was 1925:* Only 450,000 acres of soybeans were harvested (about three-fourths of planted acreage was plowed under or used as hay and such). Total soybean production was a mere 5 million bushels. Yields averaged 11.7 bushels per acre. Nary a bean was exported. We imported them.

*The past 20 years—since the great soybean*

*takeoff after World War II:* Production has about doubled in each decade. It was 234 million bushels in 1949 . . . 533 million in 1959 . . . 1.1 billion in 1969 . . . with a yearly average increase of 9 percent.

Soybean exports between 1949 and 1969 rose at the sensational yearly rate of more than 21 percent, soaring from 13 million bushels to an estimated 375 million bushels.

*Today's outlook:* Acreage, production, U.S. usage, and exports all look as though they'll set new records or near records. Only exception is carryover this September, which may be smaller than a year earlier.

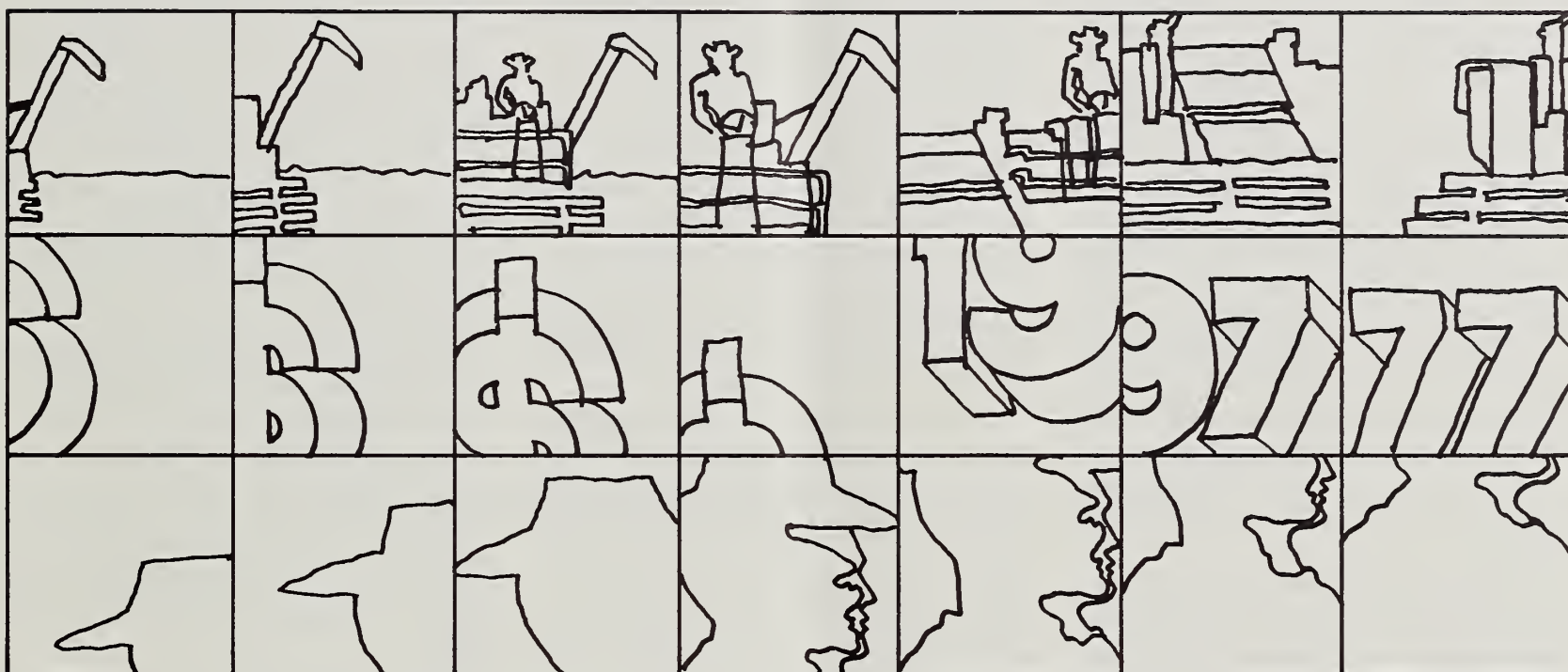
✓ Production in 1970 from indicated acreage of 43.1 million acres probably will top last year's 1.11-billion-bushel crop—assuming yields stay at trend. Average was 27.3 bushels per acre last year.

✓ Use (crushings, exports, seed, feed) is booming. For year ending August, it's likely to be up one-fifth from last season's 945 bushels. Reasons: Both at home and abroad, relatively small carryovers last fall . . . heavier demand . . . smaller supplies of competitive oils and meals.

✓ Soybeans' competitive position is enhanced at home by smaller output of cottonseed and peanut oils, lard, and butter. Dollar-sale exports—notably beans, cake and meal—also running stronger. One factor: crop declines and reduced supplies have taken some edge off competition from West African peanuts, USSR's sunflowerseed, and Peruvian fishmeal.

**Announcing SOS/70.** Science of Survival is the theme on the Third International Congress of Food Science and Technology, slated to draw 3,000 food scientists from 60 nations to Washington, D. C., Aug. 14-19, 1970. Leaders in government, education, and industry will also attend. Co-sponsored by the USDA and the International Committee on Food Science and Technology, the Congress will probe the whole gamut of world food problems.

## Combining for Profit



*Should the cash grain farmer rent, custom hire, buy on credit, or purchase his combine outright? Credit may show up best but it takes 7 years to prove the point.*

Every year Philip Andover—a cash grain farmer in Illinois—rents the combine he uses to harvest his 470 acres of corn.

This year, however, he has enough of a cash reserve to custom hire this service or buy his own combine either for cash or on credit.

Phil has always rented a machine and made money, so he's reluctant to switch to any other method.

Besides, he's sure that renting

beats any other method on a cost basis in any given year.

But what about the profitability over a longer period of time—say 7 years, the expected life of a combine?

(Though representative of farming in the Corn Belt, both Phil and his situation are hypothetical.)

Renting, as Phil already knows, costs him about \$5 an acre for the machine plus 50 cents an acre for gas, oil, and grease. In other words, he figures on roughly \$2,700 a year to harvest his entire 470 acres.

Custom hiring—at around \$8 an acre—would cost him about \$1,000 more, or \$3,700 a year, or a little under \$26,000 over the ex-

pected life of the combine. Other expenses and liabilities would add another \$7,000 to this figure. Thus, Phil's likely custom hiring total would come to more than \$33,000 for 7 years.

Renting a combine each year instead, would cost him in the neighborhood of \$19,000 in direct costs. Other miscellaneous costs—some applying specifically to machine rental—would add another \$10,000 for a total cost of slightly more than \$29,000 for the 7-year period.

Essentially, the difference in cost between the strategies of renting and custom hiring and the strategies of outright and credit purchase is the tax payment or tax deduction.

And the strategy which pro-



vides Phil with the largest tax deduction against liabilities over the 7 years will be the least-cost one for him.

Philip Andover's taxable net income currently averages around \$15,000.

Assuming that over the 7-year lifetime of a combine his income fluctuates as much as 40 percent above and below that average, and allowing for personal deductions and other income variables, Phil could expect a discounted income stream of somewhat over \$87,500 for the entire period.

Thus, through custom hiring, Phil would probably retain roughly \$54,500 in cash over the period. If he rented, this figure would be about \$58,500.

How does this stack up against outright purchase or buying his own combine on credit?

If Phil pays around \$9,500 cash for a new machine, he will still have to add his operating costs of about \$635 a year (50 cents an acre for gas, oil, and grease plus another 85 cents an acre for repairs).

Buying on credit, he would probably pay one-third of the \$9,500 down and the rest in two equal yearly installments at 7-percent interest on the balance.

Payments and operating costs the first 3 years would average around \$4,000 a year. The next 4 years annual costs would be only the \$635 in operating costs.

Taking tax deductions, depreciation, and all other factors into consideration over the 7-year expected life of the machine, Phil could figure on retaining about \$60,700 in cash if he bought his combine outright.

If he bought it on credit he would probably retain about \$60,900 in cash.

Thus, buying on credit would apparently leave Phil Andover \$200 better off than if he paid cash; more than \$6,000 better off than custom hiring; and more than \$2,000 better off than renting a combine each year. (1)

## Dairymen Expect Better Prices, Higher Gross Sales in the '70s

The good news for dairy producers is the prospect of higher milk prices and bigger cash receipts in the decade of the 1970's.

Also on the horizon: a closer balance between supply and demand of dairy products, perhaps even total disappearance of surpluses by the year 1980.

Gross receipts from marketings of milk and cream are expected to rise 25 to 35 percent. Sales in 1969 exceeded \$6.1 billion.

Still greater increases are envisioned for average gross sales per farm. They may rise to \$40,000-\$45,000 by 1980, nearly three times the average for 1969.

(These are the "would-be" prospects with the dairy support level and Federal order pricing as they were in 1969.)

But there will be fewer farms to share in this increase. Farm numbers have trended downward in the postwar period, and will continue to decline in the seventies. ERS outlookers foresee a 50-percent drop in commercial dairy farms by 1980. They now number around 400,000.

Cow numbers would be down too—by roughly one-third from 1969's average count of 12.7 million.

Total milk production would drop off as a consequence, but not as sharply as farm and cow numbers.

One reason is that average milk output per cow is expected to increase through improved breeding, management, and feeding practices. By 1980, per-cow output may be up 30 percent from the 9,158 pounds in 1969.

Also, those 200,000 farms will be keeping larger herds: average herd size, today about 30 cows, will rise to about 50. And, herds of over 100 cows will become more common.

All this considered, milk production in 1980 could drop well

below the 116 billion pounds produced last year.

On the demand side, per capita consumption will not increase. Since 1942, the per capita figure has declined at an annual average of nearly 10 pounds (measured in milk equivalent, fat-solid basis)—from 832 pounds to 565 pounds in 1969.

Butter and other high-fat products will account for most of the falloff in demand during the 1970's. On the other hand, consumption of products with low-fat content will rise, including low-fat and skim milks, ice milk, cottage cheese, and whey solids.

Whey solids have been going mainly into livestock rations. But they have a promising market potential for use in bakery products, prepared foods, candies, and ice cream.

With milk production moving more closely in line with demand, the economists anticipate a dwindling of dairy surpluses.

In addition, nearly all marketings would be commercial sales, inasmuch as government purchases would be minimal at the higher market prices being projected.

The gain in milk prices would reflect the closer balance in supply and demand; a general price rise in the U.S. economy; and growing efficiency in assembly and distribution of dairy products.

The dairy industry can expect other changes as the decade wears on:

—More milk will become eligible for the fluid market, owing to better prices for Grade A milk and the enforcement of stricter sanitary standards for milk of manufacturing grades.

—Smaller producer organizations will be merging with the big marketing federations and co-ops.

—Processing plants will become bigger and fewer in number.

—Vertical integration of dairy marketing will increase. New "super plants" will combine the manufacturing operations. (2)



## Handwriting's on Wall: Tobacco Will Be Mechanized, But When?

It took more than 25 years for mechanical pickers to take over the cotton harvest and about the same length of time for the potato crop to be mechanized.

How long will it be for flue-cured tobacco?

Prototypes of mechanical tobacco harvesters have been around for years. Yet to date virtually no tobacco has been machine harvested.

Adoption of mechanical cotton pickers and potato harvesters progressed slowly because of relatively stable farm wage rates and adequate labor supplies.

By contrast, mechanical cherry shakers and tomato harvesters came into being during a period of rapidly rising farm wages and

disruption of the labor supply by termination of the bracero program. Adoption of these machines was therefore much more rapid than was the case with potato and cotton pickers in earlier years.

But if tobacco mechanization is adopted as fast as tomato and cherry harvesters, by 1975 a maximum of 40 percent of the production of flue-cured tobacco might be mechanized.

Conditions are somewhat similar. Wage rates are rising rapidly, due to inclusion of farmworkers under the Fair Labor Standards Act, increasing social security, and prospects of other social legislation covering unemployment insurance and collective bargaining. In addition, high nonfarm wage rates are luring the better workers from the farm workforce.

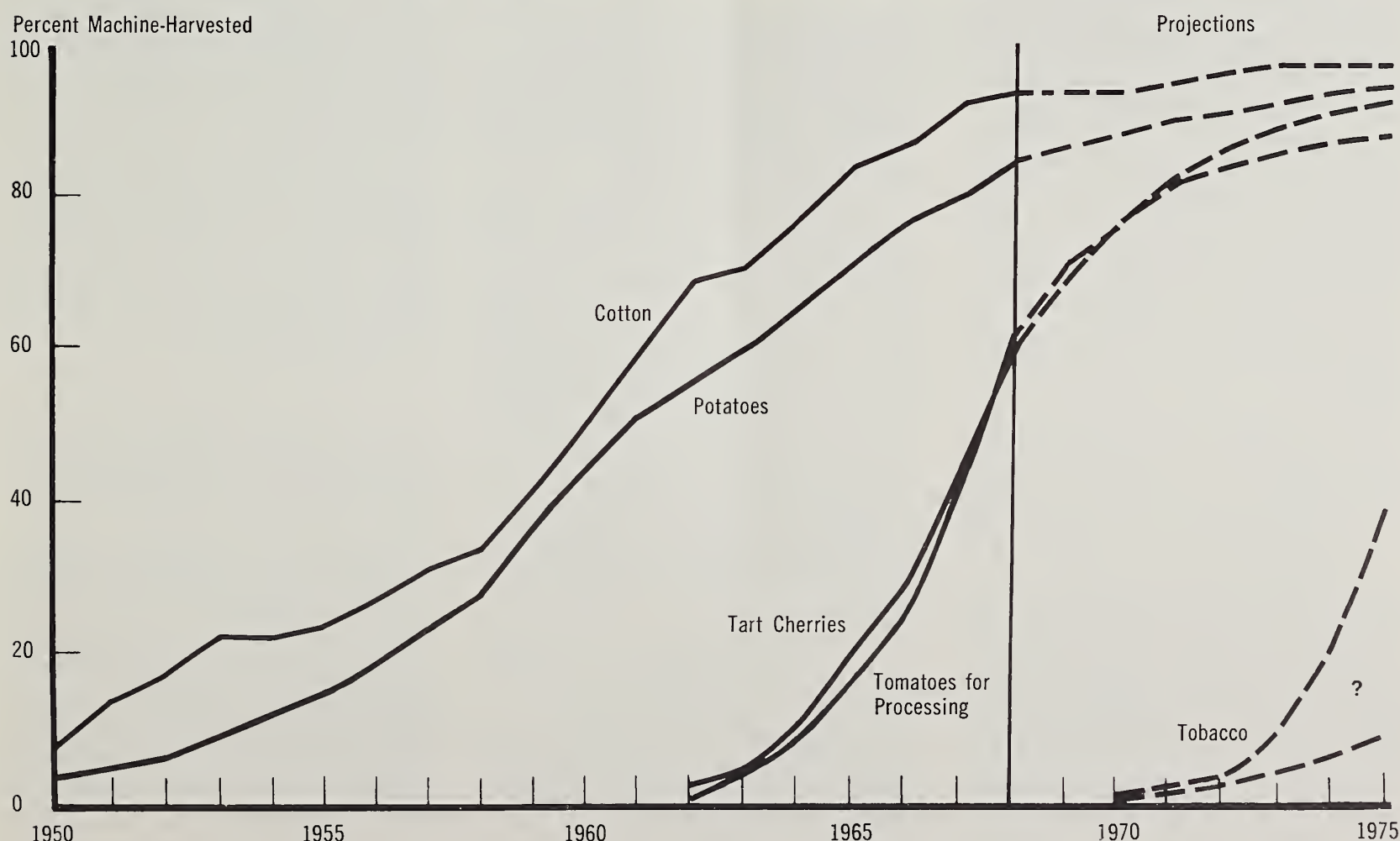
Other conditions in the flue-cured tobacco industry favor the

slower cotton-and-potato harvest-rate of adoption. These factors include the current tobacco program, which tends to hold back mechanization because of small acreage allotments per farm; an excess of old tobacco barns with no alternative uses; custom and tradition in marketing the leaves; and the capitalization of allotments into current land values.

When the slower adoption factors are considered alongside the rapid, probably only some 10 to 15 percent of the flue-cured tobacco crop will be machine harvested by 1975.

But farmers, workers, and others concerned can clearly see the handwriting on the wall. Mechanical tobacco harvesting is on its way even though many deep-seated barriers must be overcome before mechanization is readily adopted. (3)

### THE MACHINE TAKEOVER: Will History Repeat Itself in Tobacco?





## New Designs for Crop Terraces Tie Farmability to Conservation

Terraces have long been one of man's most effective tools to bend the forces of nature to work for him rather than against him.

Many of today's U.S. farmers have found them a good thing to include in their conservation kit.

Yet many other farmers whose land is subject to runoff and erosion have shied away from terracing because they think the conservation measure might complicate their field operations.

Now, however, new interest in terracing on U.S. cropland has been sparked by the development of designs for terraces that are not only economically feasible but also highly farmable. USDA's Economic Research Service and the Agricultural Research Service have been jointly studying the feasibility and economics of alternative terrace designs.

The farmer on loamy soils in the Corn Belt, they conclude, may even find that use of grass back-sloped terraces can increase his machinery efficiency while cutting waterway maintenance costs.

A case history of a 150-acre terraced watershed in the Missouri River valley adjacent to a neighboring unterraced watershed shows that waterway maintenance costs on the terraced watershed were \$25.50 for the period 1966-68. This is about 6 cents per year per acre of watershed.

In contrast, maintenance cost for waterways on the unterraced watershed was \$586.50 during the same period—or about \$1.03 per year per acre.

Moreover, rough fields with short row lengths could be transformed by terraces into smooth fields with long rows that permitted efficient operation of the big machinery needed by today's farmer.

On the terraced Iowa watershed under study, the farmable

land slope was decreased an average of 4 percent where the natural topography varied from 8 to 14 percent.

But as a result of this modest decrease in slope, the farm operator could expect an increase of almost 18 percent in the average mile-per-hour speed of field machinery. Assuming a tractor operation cost of \$3.00 per acre per year, this gain in operating efficiency converts to 54 cents savings in operating cost per acre on the terraced watershed.

In addition to these possible efficiencies, terraces with tile drainage—generally recommended—permit earlier field operation in the terrace channels and removal



of standing water during the growing season.

Other on- and off-site benefits of terracing include reduced sheet erosion, gully growth, sediment pollution, and flooding.

A word of warning, however, ensues from the Iowa study. Any cropland worth terracing at all is worth terracing properly, to help ensure that cost of construction and subsequent crop production will be at least balanced by better yields and conservation benefits.

The Iowa study points up, in particular, that it's advisable to:

—Maintain good soil structure in terrace channels by constructing terraces when soil moisture is favorable and not conducive to puddling.

—Use drainage tile on the steeper slopes to drain excess water from terrace channels.

—Apply as much, or more, fertilizer to crops on a terraced watershed as you would on unterraced watersheds. (4)

## Benches May Sub for Terraces In Forage Areas of the Dakotas

Farmers in the Dakotas don't go in strongly for terraces as they are not usually adaptable to the local terrain, but some farmers are showing interest in use of level benches.

Benches, though similar to terraces, are much wider, level overall, and diked at the ends and front.

Experimenters in the Agricultural Research Service report that use of level benches in the Dakotas more than doubled alfalfa production and boosted brome-grass yields almost 75 percent over yields produced on natural slopes. The increase in wheat yields was of less significance—5 to 6 bushels per acre.

The increased yields are largely the result of the benches' ability to hold snow and snowmelt water.

Corresponding economic studies by the Economic Research Service indicated that cost per acre for bench construction may range from \$25 for the narrowest benches on the gentlest slopes to \$353 for 70-foot benches on 10-percent slopes.

In the Dakotas, stripcropping is fairly widely adopted. Contour farming is also practiced, but on a more modest scale. In both cases these are the easiest and least expensive conservation and erosion control practices. (5)

## Money Problems Ease for N.J. Egg Producers as Profits Rise

To the New Jersey egg industry, 1969 was a year it had long been waiting for.

Average net returns, climbing since 1966, reached a record high of \$14,400 per commercial farm. Cash receipts totaled \$41,620 per farm—up 29 percent from 1968.

Taking the past 20 years, annual net receipts barely averaged



\$4,300. In 1959, New Jersey's egg industry didn't even show a profit when statewide farm receipts were averaged out: producers that year suffered a net loss of more than \$500 per farm.

Plummeting incomes, with mounting debts, prompted many egg producers to turn to more profitable enterprises. By 1964, numbers of egg farms had dropped to 2,800 compared with almost 17,000 in 1950.

New Jersey's ranking as an egg producing State fell from 11th place in 1960 to 28th last year. This State nonetheless continues to be a mainstay supplier of eggs for the New York market.

Net returns in 1969 grew because of increases in (1) wholesale egg prices, (2) production per bird, (3) size of flocks, and (4) prices received for culled layers.

Egg prices—the highest since 1953—averaged 45.7 cents per dozen. They ranged from 32 cents in May to 64 cents in December. Of the 29-percent increase in 1969 cash receipts, roughly 78 percent came from better egg prices.

Egg production averaged 205 eggs per layer, up slightly from 1968, and second highest on record.

Average size of laying flocks went up 4 percent to 5,600 birds.

Prices received for culled birds rose 15 cents per hen. Even though farmers culled less heavily—owing to the favorable egg prices—they still got bigger cash receipts from cull sales in 1969 because of price.

Operating expenses edged upward by 7 percent to \$28,700 per farm. Feed costs, the biggest component, also increased. But due to better egg prices, the egg/feed price ratio was actually more favorable than in 1968.

Outlays for other production items increased only moderately.

Prices paid for all commodities and services, however, registered a 5-percent gain, partly because of advances in wage rates. (6)

### Re: Taxes

Do you plan to hire students or part-time workers on the farm this summer?

If you do, be sure to take note of an important change in the rules governing withholdings of employee taxes on wages paid after April 30, 1970.

For the first time, under the Tax Reform Act of 1969, workers' wages are not subject to Federal income tax withholdings, provided: a worker certifies to you that he does not expect to earn enough income to pay taxes in 1970, and that he did not have to pay taxes in 1969. (7)

### Farm Growth Rate in Indiana Is Closely Linked to Efficiency

How does a farm grow?

ERS economists recently looked into this question through a Purdue University Farm Account Project to evaluate capital accumulation and resource adjustments of farms in the Hoosier State.

The study covers a 20-year period, 1945 through 1965, and zeros in on the growth and characteristics of 33 farms located throughout the State. They are divided into two groups, the "slow growers" and the "fast growers."

The slow growers consisted of the 16 farms with the lowest average annual rates of increase in operator net worth, while the fast growers represented 17 farms with the highest rates of increase in operator net worth.

During the reporting period the average slow growers' net worth increased by about \$25,000 for an annual rate of gain of 2.6 percent. During the same period, the fast growers' net worth jumped by \$114,000 representing an annual gain of 9.1 percent.

To accomplish this, they raised more livestock, grew more acres of intensive crops, farmed more acres, had more machines, borrowed more money, hired more

labor, and just generally conducted a more efficient operation.

As a result of their efficiency, fast growers recorded higher crop yields per acre and received higher livestock receipts per dollar of feed fed.

Both the slow and fast growing farms had approximately the same farm size (208 vs. 233 acres); about the same total farm (operator and landlord) investment (\$34,535 vs \$38,773); and approximately the same (operator) indebtedness (\$1,219 vs. \$1,029).

However, dissimilarities between the two types of farms were probably more important than the similarities.

The average assets and net worth of operators in the slow growing group was approximately 50 percent larger than that of the fast growing group. But much of the added investment was in land.

And the slow grower *owned* 177 acres in 1945, compared with 114 acres for the fast growers.

But the fast growers started out with almost double the number of animal units (mostly hogs) as the slow growers (36 vs. 61).

Apparently, a relatively low net worth and a relatively small number of acres owned in 1945 was *not* a deterrent to farm growth over the ensuing 20 years.

Among significant differences between the two groups:

The fast growers had \$3,840 invested in machinery in 1945, and their machinery investment had grown to \$18,256 by 1965. The slow growers began with an initial investment of \$3,415 in 1945, and by 1965, their machinery was valued at \$9,251.

Both groups used roughly \$1,000 worth of credit in 1945. But by 1965 the slow growers' debt had risen to \$13,425 while the fast growers' had risen to \$20,835. However, the latter's share of ownership had risen to 60 percent from 50 percent of the land he was farming in 1945. (8)



## Pickens' Private War on Poverty



*A paper plant in Pickens, Miss.? It seemed like a good idea at the time, but after 9 years the plant closed down and people are still asking how and why it happened.*

Progress comes slowly to Pickens, Mississippi.

About 9 years ago, the Mississippi Industrial Land and Timber Co. (MILT) opened a tissue paper mill in the town of Pickens. The mill site was a building left empty by a defunct furniture factory.

The company hoped to provide at least 100 jobs in the plant within 3 years, and also to stimulate other employment in the area.

Just 5 years later in 1966, the

mill was closed down. It never had more than 57 employees on its payroll.

Like many rural areas of the Deep South, the counties surrounding Pickens are poor. Many of the young people have left for the city. And the majority of those who stay behind are older people or children—either too old or not old enough to work.

Community facilities and education are substandard. Salaries for teachers are among the lowest in the country. Almost a quarter of the people over 25 are illiterate.

Per capita income in the area in 1963 was only \$1,114—more than \$1,000 below the national average.

Despite these drawbacks, it had seemed at first that Pickens would be a good place for a paper mill. The project was backed enthusiastically by members of the local Area Development Association.

Why did they think it would succeed?

—Supplies of pine pulpwood were abundant and not being fully used. Also, the existing factory building had good highway and rail connections and a river was close by for waste disposal.

—Though local labor was mostly unskilled, the plant could provide on-the-job training and experience.

—Skilled supervisory and management personnel could be



brought in to help to boost the levels-of-living quality in the area.

—Employment in a productive business would raise the sights of the local residents and stimulate interest in the area.

By the end of the first year, the plant had suffered considerable financial loss.

The company could neither recruit enough outside labor nor upgrade enough local skills to keep the mill going. MILT officials had hoped that on-the-job training would be sufficient to train an adequate labor force.

But for the most part, local men found the technical requirements of a papermaking plant were quite different from those of a furniture factory and this expectation was never fully realized.

Secondhand equipment had been donated by a machinery company to keep costs down, but this equipment soon gave out. In the fall of 1964, after 3 years of operation, much of it had to be replaced.

MILT had been buying wet pulp for raw material, but it proved to be of inconsistent quality. So, in the winter of 1964, the firm expanded the project to include its own pulpwood mill and also to refine purchased pulp.

In spite of these efforts, the continuing problems of labor, management, and machinery climaxed in closure of the mill.

The failure of the project at Pickens points up recurring problems in area development.

—How can a firm attract an adequate supply of skilled labor to a rural community?

—With high family poverty and adult illiteracy, what is the right mix of public programs to provide enough jobs at least cost?

—To what extent is job creation in such communities related to welfare activities—meeting citizens' needs as consumers rather than producers?

—How are public and private efforts best consolidated to meet the needs? (9)

## Labor and New Machines Keep Maine Potato Farmer in Stew

As potatoes go, so goes Maine—Aroostook County, at any rate.

When potato prices and profits are up, so is business in the area. When they are down, everybody feels it, from the head of the local government down to the boy who delivers the paper.

In addition to the normal economic ups and downs, however, Aroostook potato producers are at present faced with other problems—both machine and manmade.

On the average potato farm, the farmer and his family do most of the work until harvesttime. Then, hired help is generally brought in.

Thousands of workers from the local area, augmented by migrant help from across the Canadian border and small numbers of other foreign nationals, work the potato fields at harvest. They are paid on a piece rate basis. The schools even close for 3 weeks so the children can help out.

But both local workers and many of the foreign helpers now have more nonfarm job opportunities available to them. In addition, the minimum wage and other labor legislation has gradually extended to potato workers. And Aroostook farmers are finding they have to pay more to harvest their potatoes by hand.

Even the practice of closing the schools is undergoing change, partly because of tighter restrictions on employing helpers under 16 years of age.

Traditionally, potatoes are dug with a 2-row digger attached to a tractor. Workers then pick the potatoes on a piece rate basis and empty filled baskets into barrels.

Another crew then loads the barrels onto a truck with a mechanical hoist. And the truck transports the potatoes to the storage house where the barrels are unloaded by hand.

By contrast, a small mechanized potato harvester system is

organized around a 1-row harvester which both digs up and picks up the potatoes. The potatoes are still loaded into barrels as before, however.

A medium-sized harvester system is organized around a 2-row harvester and the potatoes are generally collected in bulk in trucks. A mechanical conveyor and bin piler then is often used in the storage house to unload the truck.

A large-sized harvester system is similar to a medium-sized one except that two 2-row harvesters are used instead of one.

Since the capital outlay is large, whether or not to go to potato harvesters is a decision each operator must make for himself on the basis of his particular situation.

The Economic Research Service, looking into the potato profit picture in the Aroostook area, discovered that, with present machinery and labor costs, small farms might do well to stick with traditional hand harvesting methods.

On the other hand, it pays large farms to buy and use mechanical harvesters.

Because of the high cost of mechanization, even though a grower with a digger harvesting system is confronted with rising wages he may still find it more economical to retain the digger system for the time being. But at some future date, if the cost to change over to machines is reduced or labor costs continue to rise, he may change his mind.

Another grower may be faced with picking crew problems. He may find the traditional labor sources no longer exist. Young people do not want to do the same kind of work their parents did. The crew may leave before completing the harvest. And so on.

In such cases, to make sure his crop is harvested, the grower may be forced to adopt the labor saving equipment even though it costs him more. (10)



## **Built To Control Oklahoma Flood Water, Reservoirs Irrigate, Too**

Many an Oklahoma farmer has stood by helplessly while a flash storm washed away his valuable crops and topsoil.

Now, in area after area, not only have major flood hazard problems been licked, but farmers are actually putting the tamed flood waters to work irrigating their crops.

A recent study indicates that income in many Oklahoma areas has been increased by irrigating farmland from upstream detention reservoirs designed basically for flood control purposes. The amount of increase in net farm income is estimated at \$155,615, or \$1,691 per farmer irrigating this way from 89 detention reservoirs.

Through a multiplier effect, the boost in farmer incomes also has added to the area's job opportunities, wholesale and retail sales, expenditures for services, and non-farm personal incomes.

Using an estimate of slightly more than 10 percent of the gain in total net farm income, these indirect benefits have been calculated at \$16,495, thus raising total gains from upstream detention reservoirs to an estimated \$172,110.

These detention reservoirs have been built, and are still being built, mainly to keep rivers and streams from overflowing into productive fields when severe storms periodically inundate the countryside.

But, while the primary purpose of these reservoirs is to catch rapid runoff from fields, some farmers have also been able to obtain irrigation water from the reservoirs.

The ERS study of flood water use was made in cooperation with Oklahoma State University and USDA's Soil Conservation Service. It covered 92 farmers who irrigated 5,367 acres from the 89 detention reservoirs. It indicated

that 74 of the farmers had no other source of irrigation water.

Some 19,100 acre-feet of water storage space in the 89 reservoirs was available for irrigation water in 1969. This was an average of more than 3.5 acre-feet of water for each acre of land the farmers irrigated.

Fifty-seven of the farmers pumped their water directly from the reservoirs and therefore suffered little loss from evaporation and seepage.

The other farmers, however, picking up the water as far as 2½ miles downstream, lost an amount of water in proportion to the distance traveled, the condition of the streambed, and other environmental conditions.

Of the 5,367 acres irrigated from upstream detention reservoirs in 1969, 3,997 acres were in crops and 1,379 acres in pastureland.

Peanuts were the most important crop irrigated. They accounted for 31 percent of the total acres studied. Bermuda grass was second with 23 percent, and alfalfa third with 19 percent.

As more reservoirs are built and more farmers begin to irrigate from the new sites as well as the old, total benefits are expected to increase even more. (12)

## **Water-Based Recreation Scores New England Play-for-Pay Gains**

The trees are there. The streams and the lakes. The animals, too. And, inevitably, the tourists. Why not capitalize on all this recreation potential?

That, apparently, is the way many farmers and other rural landowners in the Connecticut River Basin have felt in recent years.

The Connecticut River Basin includes some 17 counties in New Hampshire, Vermont, Massachusetts, and Connecticut.

Since 1960 the number of places

in this area that offer opportunities for water-based recreation has almost doubled, bringing the total to 326 such firms in 1968.

And—though the bulk of the swimming and picnicking facilities are still publicly owned—most of the new recreation areas are private commercial operations.

A clustering of firms in the southernmost part of the Basin provides boat-related services and access to Long Island Sound.

Almost 80 percent of the trailer parks and campsites and about half of the boating facilities open in the summer of 1968 were privately owned.

Approximately 7,500 individual campsites were provided by 147 private commercial campgrounds.

This means a possible savings of public funds ordinarily earmarked for recreation purposes.

Should population pressures increase, however, profits from private recreation may not be able to compete with other, more valuable, use of the land. Public expenditures may then be necessary to preserve recreation facilities in the area. (11)

## **Woods Might Be a Buffer Zone For Northeast Livestock Farmers**

See no livestock. Hear no livestock. Smell no livestock.

Increasing numbers of Northeastern suburbanites, rural non-farm dwellers, and recreationists are objecting to the smells, the sounds, and what they consider to be the unesthetic appearance of some farm operations.

Major conflicts, in fact, have already developed between some poultry and hog producers in the Northeast and their near neighbors.

Many of these neighbors are ex-urbanites who have moved into rural areas to get away from the manmade sights, sounds, and smells of the cities.



In some cases, their complaints have actually forced curtailment or elimination of farm enterprises—especially poultry operations.

One way around this growing problem—as suggested by an Economic Research Service sociologist—is to use forestland as a buffer zone between livestock operations and urban areas.

Right now relatively large segments of Northeastern land are used to grow trees for possible use as lumber or in paper products. Woodland owners control over half of the land area of some counties that are in the Northeast Region.

(The nine Northeast Region States include the six New England States plus New York, New Jersey, and Pennsylvania.)

Livestock operations in or near Northeast forestlands not only avoid direct confrontation with complaining neighbors but enjoy convenient waste disposal facilities.

With 300,000-bird poultry, 250-cow dairy, 5,000-head hog, and 2,000-head beef cattle operations projected for the Northeast in the future, the cost of waste disposal will in all probability become critical.

And the difficulties operators of these enlarged enterprises will face in being good neighbors in their current locations will increase astronomically.

Recreationists needn't worry too much about using this land for animal waste disposal. Most of it is held in relatively large tracts.

And, aside from occasional use by hunters, fishermen, and snowmobile operators, it is not generally used for recreation.

Even the largest feedlot or broiler operation would use only a tiny fraction of an individual owner's property. And proper disposal of animal waste in the forest is compatible with most forestry uses.

Woodland owners could rent land to existing and new livestock

enterprises. Or they could go into beef, hog, or dairy production themselves. Or they could sell pockets of land in or around forests for use by livestock producers.

Such forest use could benefit everyone concerned. (13)

### **Measuring North Dakota Schools: City Schools Better on All Counts**

Rural mothers—like mothers everywhere — want the best schools for their children.

Yet, by the usual standards of measurement, they frequently don't get them.

When pupils' individual scores on standard achievement tests are compared, those in rural school systems often come out on the short end.

Other measurements of a school system's quality range from the educational backgrounds of the teachers to the amount of money allocated per pupil.

They include minimum professional standards for administrators, teachers, counselors, and librarians.

They also include number and subject matter of curriculum offerings; quality measures for libraries, equipment, school plant and grounds; and morale and attitude of staff and students.

In a study of North Dakota schools, urban administrators, teachers, librarians, and counselors were better trained and better paid than those in rural districts.

Urban high schools offered a much larger number of courses than rural schools, especially in vocational, natural science, social studies and fine arts fields.

However, among both urban and rural North Dakota school districts, the quality of education tended to vary with size of the system.

That is, the larger the enrollment, the higher the quality of education. (14)

### **With Wages Up, Workers Down, More Machines on Farm Horizon**

Item: More than one third of farm family workers dropped out of farming in the sixties. And 38 percent of the hired workers dropped out along with them.

Item: From 1960 to 1969, farm wage rates soared, rising more than 63 percent.

Where have all the workers gone in spite of increased wages?

To nearby factories, to cities, to other, better paying, nonfarm jobs.

One reason for this is that one fourth of the U.S. farms that existed as autonomous enterprises in 1960 are now gone.

Another reason: although hired farmworkers wages have more than doubled since 1950, the rate of rise has barely kept pace with that for manufacturing workers. And in terms of actual pay, workers on U.S. farms today get only about half the hourly rate of factory workers.

Because there are fewer farms, there are fewer farm operators and fewer unpaid family workers in the farm labor force.

In the past 4 years, the number of hired farmworkers plummeted 22 percent, while the number of family workers fell off 17 percent.

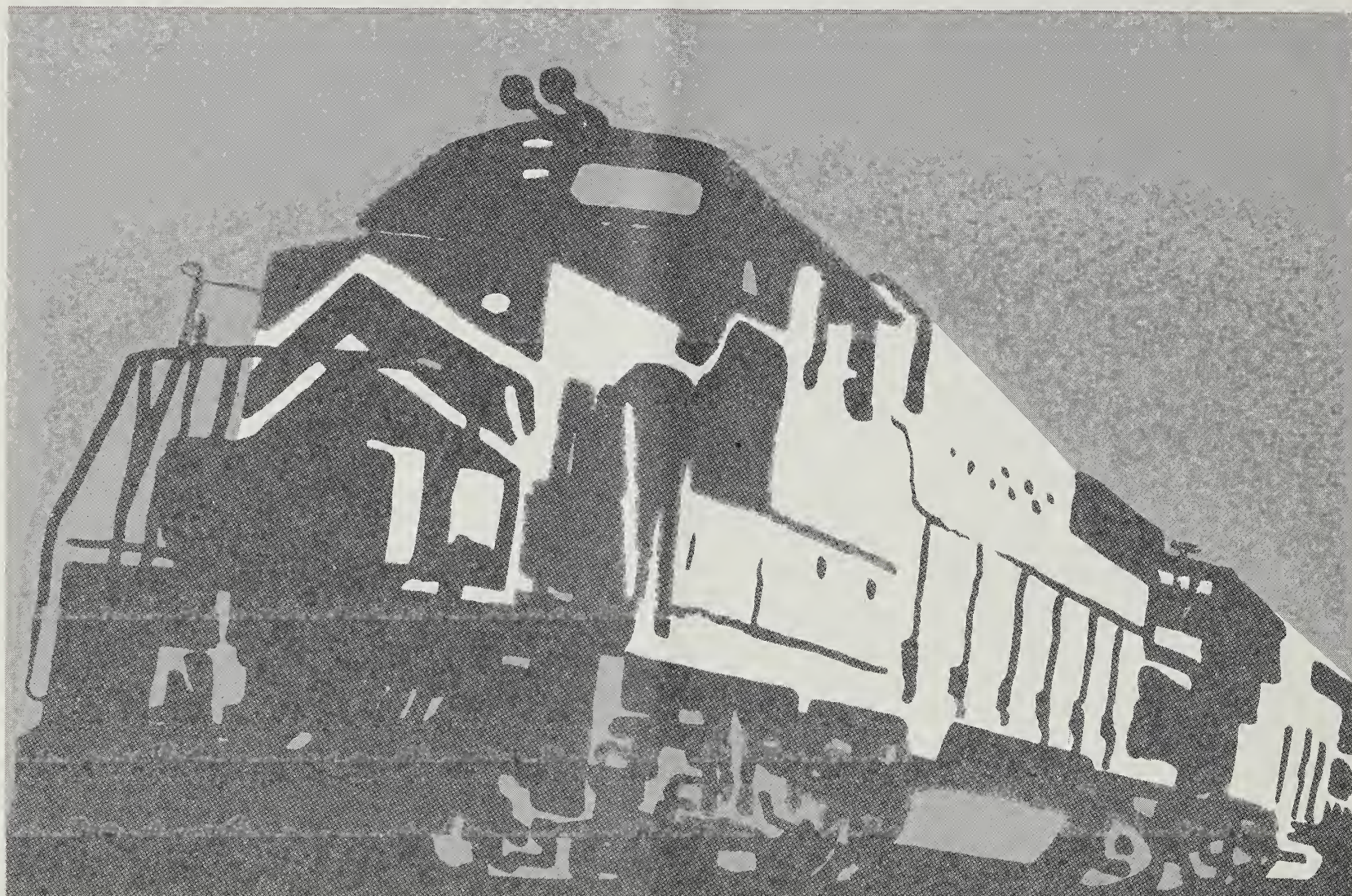
Projecting farm employment trends into the future, the number of hired farmworkers is likely to continue to decline from the 1,153,000 estimated for 1969 to only 650,000–800,000 by 1980.

Meanwhile, farm wage rates will probably continue to rise sharply and thus force more and more farmers to adopt further mechanization and substitute additional capital for labor.

At some time in the future, possibly by 1980, the decline in the number of hired workers should be materially lessened. Then, presumably, farmers will have adjusted to the mix of men and machines that provides them with the largest net returns. (15)



# THE NOT SO PLAIN TRAIN



*The '64 switch in the railroads' pricing system has encouraged investment in more up-to-date box cars designed to facilitate shipment of farm wares to market.*

A "market-oriented" railcar is one that makes it as easy as possible for shippers to get their wares to market. And the modern railcar is capable of making things pretty convenient—if and when enough of them are available.

(Meanwhile, though the number of "market-oriented" cars has increased, "general purpose" box-car numbers have declined. As a

result, agricultural shippers have periodically had problems in getting products to market by train.)

Special service boxcars have wide doors and sliding center sills. Covered hopper cars, with roof hatches for loading and hopper outlets for unloading are available for carrying grain and other flowing bulk commodities. And truck trailers on special flatcars are capable of turning around three times as fast as the average freight car because loading and unloading is less laborious.

While in 1959 market-oriented cars accounted for only 18.3 percent of new cars purchased by Class I railroads, by 1967 they

accounted for 56.6 percent.

The year 1964 marked the switch of tracks for the railroads. The pricing system—set up back in 1902 — was significantly changed.

The new system has already encouraged railroads to invest in new market-oriented cars and more up-to-date equipment. The impact can be seen from changes in the types of railcars owned by the railroads between 1959 and 1967.

The old system was based on a flat per diem code. Rates were quite low—ranging from 20 cents a day in 1902 to \$2.88 in 1959.

But the flat rate did not take



the original costs of specific railcars into account.

If a new car, for example, is assumed to have a life of 30 years, and to bring a 6-percent return on investment, the 1959 per diem rate of \$2.88 would hardly compensate the owner for even the lowest priced new railcar. (Data from the Interstate Commerce Commission indicated that the cost of new railcars ranged from an average of \$8,715 for regular hopper cars to \$15,667 for refrigerated cars in 1959.)

Railroad owners were understandably discouraged from buying new cars or from investing in more expensive market-oriented equipment.

Some shippers, in fact, who wanted to use the more efficient cars, resorted to buying their own. These cars were assigned to haul for a specific shipper and could be used by someone else only by special arrangement.

The new pricing system involves a graduated scale of per diem rates revolving around "original cost per car depreciated." This means that the per diem rate is based on the cost of a new car rather than on the average value of the existing fleet. The rates range from \$2.16 for a car valued at \$1,000 or less, to \$12.18 for a car worth \$30,000 or more.

The number of general purpose cars went down from 1,499,132 in 1959 to 1,103,423 in 1967, while market-oriented cars on the rails went up from 177,264 (or 10.6 percent of the total fleet) to 373,743 (or 25.3 percent).

Ownership of market-oriented cars went up by 37.3 percent for rack cars for hauling automobiles and 159.4 percent for special service boxcars. In contrast, ownership of general purpose cars went down by 47.5 percent for stock cars and 14.6 for hopper cars. And there was a 410.0-percent increase in the purchase of market-oriented cars and a 12.6-percent drop for all-purpose cars. (16)

### **Storage and Handling Costs Add A Penny or Two to Zoo Peanuts**

Before some of them are tossed to the elephants at the zoo, most peanuts have already been through quite a bit.

They have probably been cleaned and dried; transported to a receiving site to be weighed, sampled, and graded; put into storage; and loaded out.

All of this costs money.

In 1969, estimates of average standardized costs for cleaning and drying peanuts varied from 19 cents per ton received for warehouses with shelling plants ("shellers") in Virginia-North Carolina to \$4.47 for warehouses in the Southeast. The low cost for Virginia-North Carolina shellers is due to the small percentage of peanuts cleaned and dried by this group of plants.

Receiving costs averaged \$2.53 per ton for all types of facilities, and ranged from \$1.99 for Virginia-North Carolina shellers, to \$4.19 for warehouses in the Southeast.

Loading-out costs averaged \$1.54, with a range from \$1.19 per ton for Virginia-North Carolina shellers to \$1.97 for Southeast warehouses. Combined handling cost for all facilities averaged \$4.07 per ton.

Average storage costs ranged from 47 cents per ton each month for Virginia-North Carolina shellers, to \$1.57 for Virginia-North Carolina warehouses. (The higher cost of the warehouse was primarily due to the short storage period.) (17)

### **Consumer Demands Given More Weight in New Marketing Setups**

The basic system of converting raw foods into the products that consumers eat and drink is far from new. But efforts to make the system more responsive to

consumer demands and to create demand for new food products are relatively recent.

As one result of attempts to reach these goals, vertically coordinated systems for buying and marketing products are emerging.

And in the absence of specific policies to check or modify the trend, control is likely to shift increasingly into the hands of nonfarm firms that have the size, skill, and strength to standardize the various parts of the food production and marketing system.

Historically, the farmer and the food industry relied on the price system operating in open markets as the chief means for coordinating the numerous intermediate stages with the final demand for food—and fiber, too. And this system is still the chief regulator for widely produced products such as wheat, cotton, and feed grains.

But for specialized crops such as sugarcane and sugar beets, vegetables for processing, and some fruits, open markets were, for the most part, replaced long ago by a system of contracts and fully integrated production. And recently, the basic techniques of integration that developed in the broiler industry are being extended to cattle feeding, hogs, and even fresh vegetables.

There are two predominant forms of vertical integration.

One is "contract production"—commonly employed in the case of a relatively large number of products. The other is "direct production" by the processor or by the supplier of production inputs such as feed, seed, and fertilizer.

Although some firms combine both contract and direct production, the value of agricultural products being produced under contract is probably much greater than the value of output through direct production.

A recent USDA survey of agricultural corporations provides some indication of the extent to which agribusiness firms are en-



gaged in direct production.

About 20 percent of the 13,300 corporate operations covered in the study had one or more agribusiness enterprises in addition to the production of farm products. The manufacture of feed was reported most frequently. Fertilizer and meatpacking and processing came next.

An alternative, third form of integration is through the acquisition and merger of existing firms engaged in one or more of the stages involved in food production.

There are three basic kinds of mergers—vertical, horizontal, and conglomerate.

The *vertical* type brings together firms that have some functional relationship, such as a packing plant and a feed yard, or a fast-food franchiser and a broiler producer.

Typically, the goals are to obtain adequate supplies and a more orderly flow of a commodity that has some specific quality needed in a later stage of food processing or marketing.

Such mergers may also benefit participants by providing specialized management, easier access to capital for expansion, or a wider range of market outlets.

The broiler industry has become the classic example of an industry that has been going through the consolidation and merger phase in recent years. The effect has been to eliminate many of the smaller firms and broaden the food product lines and the market areas of the surviving firms.

Estimates for 1968 indicate that one-third of all broilers slaughtered that year were produced by 16 plants owned by the 9 largest firms. The largest firm in this group—a major feed company—processed about 5.5 percent of the U.S. total.

The broiler industry also offers a good example of the way a food production system can be more responsive to consumer demands

even though profit is the prime incentive.

Conversion of the “ice-pack” broiler to a convenience food is the case in point. An iced broiler will bring around 30 cents a pound; a prepackaged broiler, 35 cents; a precooked and frozen bird, 60 cents; and a ready-to-eat at a retail outlet, \$1.00 a pound.

Similar integration and merger trends are especially evident in the egg industry and in the production and marketing of catfish.

*Horizontal* mergers bring together firms producing the same kinds of commodities. A typical example is the purchase of merger of several feedlots in order to have sufficient volume for a slaughter plant.

The usual purpose is to bring about better use of management capabilities, to broaden the geographic scope of marketing activities, and to reduce transport costs.

*Conglomerate* merger — the third main reorganization development in agribusiness—generally consolidates firms that are neither competitors nor vertically related. The acquisition of a meat packing firm by an electronics firm is an example of a “pure” or conglomerate merger.

Perhaps the most important contribution made to traditional agriculture by these new firms are some of the basic techniques of organization and business management that have been perfected in the nonfarm business world. Other contributions are advanced production technology and larger amounts of capital. (18)

### **New England Poultrymen Must Swing With Changes To Survive**

Independent New England poultrymen face a real possibility of losing outlets for their eggs unless they can adjust to the structural changes occurring in the industry.

As elsewhere, the New England

table egg industry has seen dramatic changes in methods of producing, processing, and marketing eggs.

Many buyers have stopped buying ungraded eggs directly from the farm, or even farm-graded eggs destined for bulk markets—often with very little advance notice to the producer.

(And in New Hampshire, for example, a recent survey indicated that a large percentage of egg producers there are marketing precisely these types of eggs.)

Independent producers have a number of alternatives. Some of them are:

—Buying an existing marketing enterprise or starting a new one—a commercial size packing plant, for example.

Such a step might be taken by producers with a view to developing a marketing program keyed to their own production, and the retail routes and stores and institutions they want to sell to.

—Merging into a complete marketing system by means of a contract.

Although each sector is independently owned in this case, decisions are made jointly, and the total operation is taken into consideration. This has the advantage of allocating management functions to the most appropriate sector.

—Forming total production-marketing system cooperatives.

This would involve merging several producers and processing operations. A group of producers in a small area might center the cooperative around an existing marketing or feed milling enterprise so that it would entail fewer acquisitions.

Written contracts with termination clauses could also help in the short run, but they are of no real advantage in the long run. Independent decision-making by several managers in an egg production-marketing system is not usually the best way to reduce costs and make money. (19)



## "HOW MUCH?"

The answer to "How much?"—when it means the price of food—depends partly on the pricing system. And agricultural products are sold under several types of systems ranging from the "free market" to the "authoritarian."

In the free market system—and many agricultural products are sold under this system—the seller makes the best deal he can get or accepts the going market value as established by someone else.

Under the administered system—which covers a large share of manufacturing and retail trade

—individuals, committees, trade organizations, and announced list prices are important.

Under the authoritarian system—which includes utilities and market orders—prices are usually set by boards, committees, or public agencies.

Prices (and how they're determined) have a fundamental role in both long-term and short-term decisions at all levels of industry.

In the best of all possible worlds, prices should satisfy consumers, help industry put its resources to best use, and facilitate trading. (20)

COMMODITY	GENERAL PRICING SYSTEM	BASIC PRICE LEVEL DETERMINATION	DETERMINATION OF OTHER PRICES
Eggs	Free market.	Daily base price quotations in a few wholesale markets. In New York and Chicago supported by cash exchange trading.	Premiums, discounts to other trading levels, grades, sizes, quantities, and geographical areas. Some producer returns under contracts not related to short run price changes.
Broilers	Free market.	Prices paid by large retailers for ready-to-cook broilers, selected cities, for future deliveries.	Premiums, discounts to other trading levels, quantities, and geographical locations. Periodic specializing at retail. Most producers returns under contracts related to performance standards.
Fluid Milk	Authoritarian to determine minimum levels.	Formula or negotiation under Federal-State orders, generally a pooled price to producers based on classified pricing for various end uses.	Some negotiation on differentials but many wholesale and retail prices specified under orders.
Natural cheese	Free market with Government price supports providing a floor.	Prices established on Wisconsin Cheese Exchange in Friday trading by plants & processors the primary indicator.	Assembly point prices tend to follow the exchange. Processed cheese prices become administered type.
Dressed meat	Free market.	Daily commercial quotation at Chicago.	Formula pricing to buyers, quoted price lists, or negotiations. Variable price merchandising at retail with periodic specializing of cuts.
Other processed poultry products	Administered.	Manufacturer's list prices, with adjustments for volume, delivery, branded vs. unbranded.	Retail markups. Negotiated or market price to slaughtering plants for poultry.
Cotton	Free market with Government price supports providing a floor.	Series of central market committees, under specific legislative authority, issue price quotations at central market level.	Application of differentials for location, grade, etc. Becomes manufactured products in use and original identity largely lost in pricing consumer items.
Sugar	Authoritarian with minimum prices and quotas determined under Sugar Act.	Sugar Act minimum prices for raw sugar at processor level.	Plus distributor and retail margins over refined sugar prices which are under basing point system. Beet and cane growers paid contract price largely reflected from raw sugar price. Sugar for food processors loses identity in marketing.



# QUIZ & FACTS

## WHAT'S YOUR VALUE?

Consumers have little control over food prices, but they do have a say when it comes to stretching food dollars. Excessively high grocery bills, researchers suggest, may have something to do with consumer values — merits that shoppers attach to products.

These values vary widely among individuals. So, it will not be surprising if your responses to the questionnaire below differ from the replies of nearly 300 housewives in the Twin Cities (Minneapolis and St. Paul). They were given this test a few years ago as part of a special study of upper-income families — the first intensive analysis of such food consumption patterns. The University of Minnesota cooperated with the Economic Research Service in making this landmark study.

**INSTRUCTIONS:** Circle one number for each item to indicate how important or unimportant this characteristic of a product is to you when you buy food.

How important is it that . . . . .	<i>Critically important</i> <i>Very important</i> <i>Important</i> <i>No opinion</i> <i>Unimportant</i> <i>Not very important</i> <i>Critically unimportant</i>						
Item	7	6	5	4	3	2	1
A. It's on a special sale	7	6	5	4	3	2	1
B. It's a name brand product	7	6	5	4	3	2	1
C. It has the lowest price tag	7	6	5	4	3	2	1
D. It has an established name	7	6	5	4	3	2	1
E. Its price is lower than its competitors'	7	6	5	4	3	2	1
F. It's an old standby product	7	6	5	4	3	2	1
G. It's a bargain buy	7	6	5	4	3	2	1
H. I can trust the name	7	6	5	4	3	2	1



**ADD UP** the encircled numbers for items A, C, E, and G. If the total is 15 or more, you are an economy-minded shopper — at least, more economy-minded than the average housewife in the Twin Cities survey.

Now add items B, D, F, and H. A total of 17 or more makes you a "reputation striver". You seek products with established brand names that connote reliability. You also pay more for them.

In the Twin Cities survey, respondents who were categorized as "economizing homemakers" generally spent significantly less for all food items than homemakers in families comparable in other respects. Those identified as "reputation strivers" spent considerably more.

Contents of the marketbaskets of the two groups also differed.

The economizers bought more dairy products (except butter), and less meats, processed vegetables, fats and oils, and nonalcoholic beverages. The reputation strivers spent more for prepared dishes, nonalcoholic beverages, and red meats.

Consumer value systems obviously don't tell the whole story of why a family spends more or less on food.

Current income is also important. And even more significant are the size of family and ages of its members. Larger families with older children spend more on food, particularly on food eaten at home, than the smaller households.

In the upper-income categories (above \$10,000 before taxes for families of three or more), the reasons for variations in food expenditures are often obscure. That is why researchers are broadening the base for analysis to include not only value systems, but also such factors as education and occupation of heads of household; characteristics of savings; and expectations of future incomes.

Upper-income families now ac-

count for over 15 percent of total U.S. food sales. How they allocate the food dollars they spend today provides a clue to food consumption and spending trends of the future, when more families will be achieving greater purchasing power.

The Twin Cities survey, plus the findings of various related studies, indicates that the younger generation of homemakers are putting less emphasis on food than their parents did when it comes to priorities for spending. Older homemakers continue to be the heavier food spenders.

Comparing the results of two nationwide household food surveys made 10 years apart—and allowing for inflation—an upper-income family in the mid-1960's was spending about 10 percent less for food than a comparable family 10 years earlier.

Half the homemakers in the Twin Cities survey said they had no interest in having additional money for food. Of those wanting more money, 45 percent wanted at least \$7.50 more per week. Most would spend more for meat.

Only one-sixth of the homemakers would buy more dairy products if they had a few dollars more of food money; only one-fifth expressed interest in spending more for bakery products.

Expenditures for food eaten away from home went up almost in direct proportion to increases in income per person. For food eaten at home, the difference was less substantial—an average of \$3 for each \$10 rise in income.

The analysts had this to say about current spending patterns. Expenditures on food consumed at home are showing marked increases. The reason may be that more and more postwar babies are reaching maturity and "the heavy eating stage." Spending for milk is the notable exception; this is dropping. Further declines are likely, owing to a reduction in the proportion of the population under 10 years of age. (21)

## **Fish From the Watery Deep Are But a Small Part of Yearly Diet**

The U.S. population—fishwives and fishmongers included—will probably eat about 1,230 million pounds of fish in 1970.

This estimate is "edible weight"—not the weight of the fish as it is pulled from watery deep to wharf.

The Nation's appetite for fish throughout the years has remained fairly constant at about 11 pounds per person. This is still a small mouthful compared with red meat consumption (retail weight), which averaged 159 pounds per person in 1969—including 82 pounds beef, 60 pounds pork, 3 pounds veal, and 3 pounds lamb and mutton.

Total use of fresh and frozen fish products, however, has gone up with the population.

Sales of frozen fish sticks, for example, are expected to climb to 350 million pounds this year, compared with 332 million in 1969.

About a quarter of the 1,230 million pounds of fish we'll eat this year will be groundfish—like cod, haddock, hake, pollock, and ocean perch. About 60 percent of the poundage will be imported, as U.S. haddock landings may reach a record low, and thus offset expected gains in other groundfish catches.

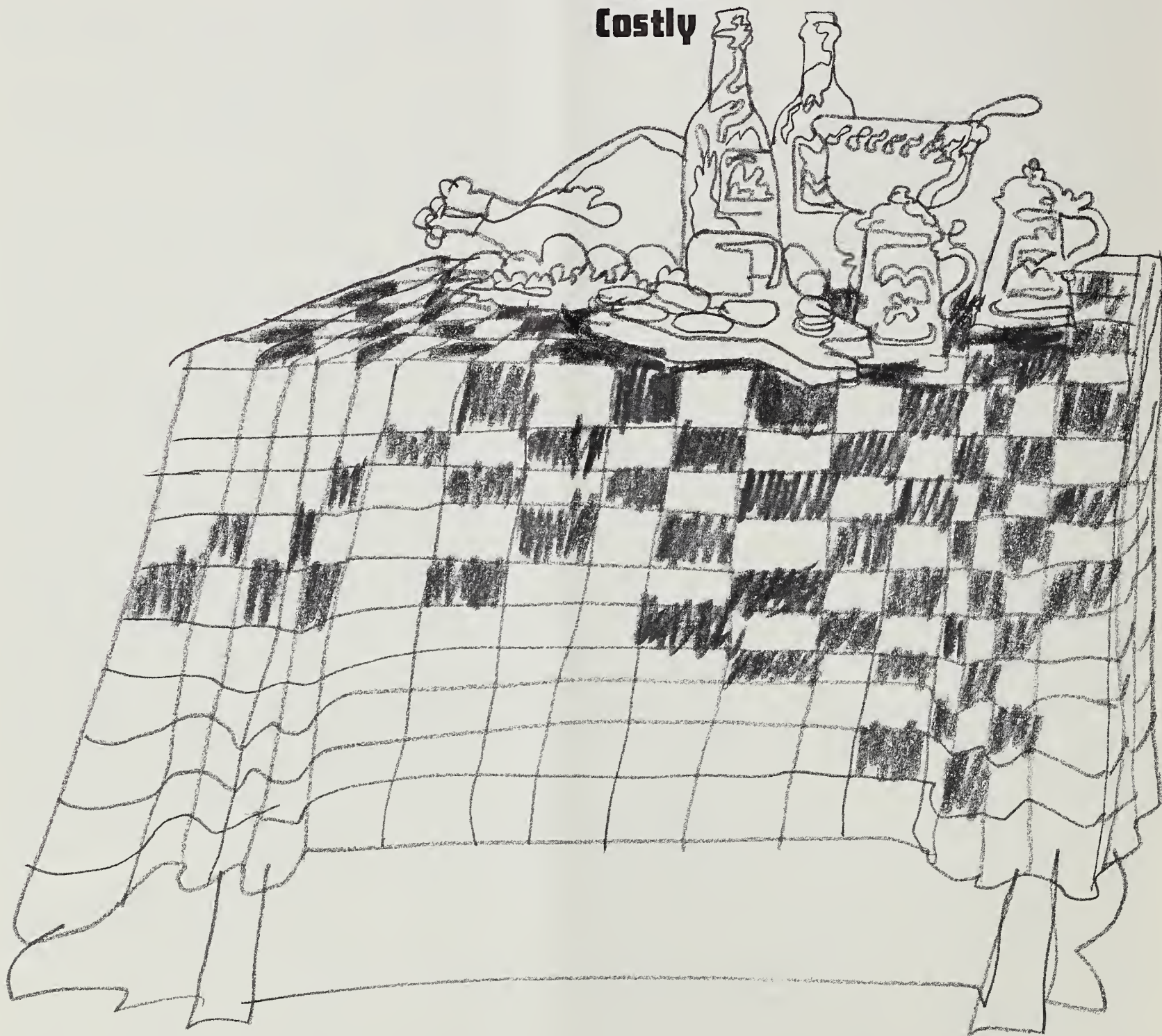
Retail prices for fresh and frozen fish will probably be up about 5 percent from last year—not as much as the 7-percent increase in 1969.

Demand for shellfish is expected to hold up. Sales of frozen shrimp are likely to increase to 330-340 million pounds from about 320 million in 1969, though prices, too, are expected to continue upward for the remainder of 1970.

Supplies of some other shellfish—sea scallops for instance—may be somewhat limited in comparison with the more plentiful supplies of recent years. (22)



## Common Market Cuisine Costly



*The European Community's common agricultural policy, with its emphasis on maintaining farm incomes, tends to push consumers' food costs up to ever higher levels.*

If M. Durand of Paris wants sirloin steak on his dinner table,

he'll have to work 4 hours to pay for it.

Even at that, he's better off than his counterpart in Munich, who'd have to put in 5 hours. By contrast, a New Yorker can buy about the same cut and kind of steak for only 53 minutes of work.

Most countries in continental

Europe have long tolerated high food costs as an acceptable price for maintaining farm income.

The Common Agricultural Policy (CAP) of the six-nation European Community, which came into being in 1962, has entrenched this principle even more firmly.

This policy has generally



pushed up the level of support prices for basic agricultural products in "the Six"—boosting the food industry's raw material costs.

At the same time, the CAP has replaced national import restrictions with a more comprehensive, formalized, and effective protective structure—preventing imports from relieving the pressure on the food trade in the Community as a whole.

Since 1962, when the first specific measures were taken to implement Communitywide policy for farm products, indices of retail prices for certain food products affected by the CAP show a rate of increase well above the general drift of retail prices.

Retail prices for wheat products, for instance, have risen 21 percent in Germany, 25 percent in France, 34 percent in Belgium, 38 percent in the Netherlands.

Bread prices in 1968 topped their 1962 level by 29 percent in

Germany, 36 percent in France, 40 percent in Belgium.

Meat and fish prices also soared. Between '62 and '68, they rose 24 percent in Italy, 32 percent in the Netherlands, 41 percent in Belgium. Beef prices went up 40 percent in Italy, 44 percent in Belgium; veal was up 36 percent in Germany, 43 percent in France.

It's impossible to tell precisely how much of these retail rises are directly attributable to the common agricultural policy.

Raw materials, after all, account for only a portion of the total cost of the retail product. The effect of changes in raw material prices is sometimes swamped by other market forces as well as the inflationary or deflationary bias of the economy.

Also the food retailing structure within the Community is still based on relatively small units. As a result, markups are large and responses to changes in costs

are erratic.

And, too, large increases in labor costs in the EC in recent years have sometimes overshadowed the importance of raw material costs. (Large wage gains, conversely, have probably enabled Community workers to accept higher food prices more readily than they might have otherwise.)

Within the European Community, a substantially greater share of consumer expenditures go for food than in the United Kingdom or the United States.

In 1967, money spent for food accounted for 33 percent of total consumer spending in Germany, 37 percent in France, and 27 percent in the Netherlands.

In the United Kingdom—where agricultural policy is more consumer oriented than the EC's—food's share of consumer expenditures was 25 percent. And in the United States it was only 19 percent, due in part to our higher income levels. (23)

#### EUROPEAN COMMUNITY CONSUMERS LABOR LONG TO PAY FOOD BILLS<sup>1</sup>

Product	Unit	New York		London		Paris <sup>2</sup>		Munich	
		Dollars	Minutes	Dollars	Minutes	Dollars	Minutes	Dollars	Minutes
White bread, unwrapped	1 kilogram	.55	13	.23	13	.36	25	.43	23
Noodles, posto	1 kilogram	.66	15	.48	27	.40	28	.43	23
Rice polished	1 kilogram	.50	11	.40	23	.30	21	.49	27
Beef									
Roast	1 kilogram	1.96	45	2.11	119	2.70	188	2.90	157
Sirloin	1 kilogram	2.30	53	2.24	127	3.49	243	5.38	291
Veal	1 kilogram	3.75	86	2.50	141	3.42	238	3.75	203
Pork									
Loin	1 kilogram	1.10	25	1.45	82	2.93	204	2.75	149
Chops	1 kilogram	1.10	25	1.58	89	2.21	154	2.13	115
Chicken, frozen	1 kilogram	.70	16	.86	49	1.13	79	.77	42
Turkey, frozen	1 kilogram	.65	15	.92	52	2.16	150	1.16	63
Ham, cooked and sliced	1 kilogram	2.61	60	2.64	149	4.27	296	4.65	252
Sugar	1 kilogram	.25	6	.20	11	.24	17	.31	17
Butter, unsalted	1 kilogram	1.95	45	.86	49	1.98	138	1.96	106
Milk, fresh	1 liter	.30	7	.20	11	.16	11	.21	11
Eggs, largest	1 dozen	.75	17	.60	34	.70	49	.75	41

<sup>1</sup> Dollar figures are prices observed in April and May 1969. Retail prices in the cities surveyed undoubtedly are higher than in other parts of the countries concerned, but these are partially or wholly offset by higher average earnings. Minutes of worktime are based on average rates of take-home pay for industrial manufacturing workers (male and female) in April 1969. <sup>2</sup> French prices converted to dollars of new rates effective since August 10, 1969.



## Australians Rival U.S. Exporters In Japan's Agricultural Market

U.S. exporters interested in selling farm products to Japan should be braced for intense competition from the Australians.

Many of the agricultural products Australia exports to Japan have long been competitive with those of the United States.

This list is likely to grow in the years to come. From all indications, Australia is determined to get a bigger piece of Japan's import business.

Japan is today by far the largest single market for U.S. farm products (U.S. exports to Japan totaled \$839 million in fiscal 1969) and for Australian commodities (exports of \$463 million in fiscal 1969). Exports of both supplying countries have been steadily climbing.

Australia, however, has done relatively better than the United States from the standpoint of sharing in the growth of the Japanese market.

Whereas Australia has maintained its market share at about 14 percent, the United States has

seen its share drop from 34 percent in calendar 1965 to less than 30 percent last year.

Partly responsible for Australia's inroads is a competitive advantage arising from lower shipping costs. To reach Japan, Australian commodities move only half as far as U.S. commodities originating at gulf coast ports.

Market development programs carried on by Australia in Japan have doubtless had an impact on export sales. The Australian Wheat, Meat, and Dairy Commodity Boards all maintain offices in Japan and actively engage in promotional activities.

In 1968 Australia spent about \$850,000 for agricultural promotion. The United States spent a total of about \$6 million that year (USDA funds plus those of cooperating trade associations) for such activities as in-store promotions, seminars, exhibitions, and trade fairs.

Competition between U.S. and Australian exporters is especially strong in these commodities: wheat, barley, nonfat dried milk, cattle hides, inedible tallow, and more recently, cotton and grain

sorghum.

Wheat is Australia's main export to Japan. It is also among the top five export items of the United States. Until 1967, the United States supplied all of Japan's import needs for soft wheat, but since then Japan has imported increasing quantities from Australia.

Sales to Japan of U.S. cotton, traditionally one of our major exports to this market, have suffered sharp declines in recent years. Meanwhile, Australia's cotton exports to Japan—though still relatively small—have been going up.

And since Australia has only begun to exploit its vast agricultural potential, it will probably be able to expand production of cotton as well as other commodities. New lands are rapidly being brought into production, and new irrigation projects are scheduled for completion in 1971.

These developments come at a time when Australia is seeking to diversify its overseas markets.

It used to be that Western Europe was Australia's largest customer. The direction of trade, however, has been gradually shifting to Far Eastern markets in recent times, particularly since 1967 and the closing of the Suez Canal.

But even before that year Australia was looking for alternative outlets, as it became increasingly apparent that Western Europe was moving toward self-sufficiency in agriculture.

Australia's exports to the United Kingdom have also been on the wane. Until fiscal 1967, the United Kingdom had been Australia's leading overseas market.

Once an important buyer of Australian wool, the U.K. market is diminishing with the change-over to synthetic blends.

In addition, Australia's reduced demand for British goods has made it difficult to maintain satisfactory trade balances between the two countries. (24)





## Climate Improving for Higher Food Output in Mainland China

The agricultural programs that are now emerging in Mainland China provide the best possibilities yet offered for an easing of that country's food shortages.

Assessing the outlook for Mainland China's agriculture, ERS economists also say that substantial gains in output are possible during the 1970's—barring adverse weather and radical changes in national policy.

Programs for development are broader in base and better coordinated than previous efforts. They range from irrigation and water management to farm mechanization, seed improvement, use of chemical fertilizers, and development of industries to supply agriculture and process its products.

Many of these programs were initiated in the 1950's. But implementation was either disrupted or discontinued during the Great Leap Forward (1958-1960) and again during the Cultural Revolution of 1966-68.

The newer development programs have already produced positive results.

It was mainly through wider use of chemical fertilizers and other inputs that farmers last year were able to get increases in crop yields, thus bigger harvests than in 1968.

Cultivated area was about the same in both years. Had weather been more favorable, the 1969 output might have exceeded even the harvest of 1967—one of the best in that country's history.

Limited ability to cope with the vagaries of weather is a problem Chinese agriculture must overcome if production is to increase. Usually 1 out of 5 years is either extremely wet or dry.

For this reason, water management projects have been assigned a high priority for development. Many of the water conservation

programs begun in the 1950's have now been completed. But whether these are adequate has yet to be determined. China has not had an extended drought in more than 8 years.

Tradewise, imports of selected farm products should continue to expand in 1970 and beyond.

Wheat and cotton imports may trend slightly upward, depending on price.

On the export side, rice exports may keep on declining (the high year for exports was 1967) because of little or no increase in the 1969 crop, combined with fall-offs in demand in international markets. Some expansion is expected in shipments of soybeans, pork, and poultry products. (25)

## Cans and Bottles Enhance Export Value of India's Big Mango Crop

What's there to drink for the thirsty traveler on the trans-Siberian express?

Mango juice from India, for one thing.

India exported over \$1 million worth of mango juice in 1968. And about half the shipments went to the USSR, where the juice has not only made its way onto dining car menus but is also reported to be a popular item in some Moscow grocery stores.

India is the world's leading mango producer and the home of numerous varieties now grown in other tropical areas. For many of India's 60 million farm families, the mango tree provides a nourishing fruit, welcome shade—and extra cash income.

In years of good production, India's dark green mango trees yield 7 million tons of fruit. But processing of the crop has been limited by lack of facilities and also by growing demand for fresh produce in the city markets.

Now, with new processing plants and new commercial orchards near Delhi and in Andhra

Pradesh to supply them, an increasing share of the mango crop is going into cans.

Exports of canned mango juice have doubled since 1966.

Exports of mango chutney are valued at about \$500,000 yearly and go to over half the countries in the world—though the U.K. takes about 50 percent. ("What's chutney?" See page 24.)

Shipments of these two mango products—along with lesser quantities of dried mango slices, canned mango fruit, mango flour, and mango jam—now bring in more than \$2 million a year in export earnings. This is about 5 times the value of fresh mango exports.

The following figures point up the rapid growth of India's three major markets for mango juice:

	1966/67	1967/68
	<i>1,000 U.S. dollars</i>	
USSR	398	576
Kuwait	165	369
Saudi Arabia	7	60

Under existing long term trade arrangements, India's exports of mango juice to the USSR can be expected to grow rapidly between now and 1975.

Also, the oil-rich markets of the Arabian Peninsula are expected to increase their purchases, since closure of the Suez Canal has hoisted prices for fruit juices traditionally coming in from Mediterranean ports. As a result, India's program to send more mango juice to the Middle East has been very successful.

The United States is only a token market for India's mangoes and mango juice—though we take about one-fifth of its exported chutney.

For most mango products we turn to Mexico or Central America. However, we are one of India's best customers for mango flour. It's used for flavoring ice cream, milk shakes, candy, and bakery products. (26)



## RECENT PUBLICATIONS

The publications listed here are issued by the Economic Research Service and cooperatively by the State universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from *The Farm Index*, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective States.

**URBANIZATION OF LAND IN THE WESTERN STATES.** Henry W. Dill Jr., and Robert C. Otte, Nat-

ural Resource Economics Division. ERS-428.

This report examines the amount and type of land passing from rural into urban use. The report using air photographs show how farmland has been turned into shopping centers, and the number of people now using the newly acquired urbanized lands. The report covers a period from 1950-1960 and includes 48 counties in 8 western States.

Over 70 percent of the converted land went into dense residential use, homes with less than an acre of land, apartments, and row houses. Farmland was also converted into factories, parks, and airports.

**RURALITY, POVERTY, AND HEALTH: MEDICAL PROBLEMS IN**

**RURAL AREAS.** Neville Doherty, Economic Development Division. ERS-AER 172.

Rapidly expanding urban-oriented medical technology, with its vast demand for new, complex and expensive equipment, intensifies the rural health care problems by posing economic and other obstacles. (See March 1970 *Farm Index*).

**MALAGASY REPUBLIC'S AGRICULTURAL ECONOMY IN BRIEF.** Fred Degiorgio, Foreign Regional Analysis Division. ERS-For. 290.

The Malagasy Republic, a land of substantial agricultural potential, may increase its output with the use of improved technology, particularly in the field of irrigation. Malagasy's resources favor the raising of cattle.

## ARTICLE SOURCES

State publications indicated by (\*) may be obtained only from the experiment station or university cited. Manuscripts and special material are usually available only on request to authors.

1. Don Bostwick, FPED. "Effects of Machinery Control Strategies on Income" *Agricultural Finance Review*, July 1969.
2. A. G. Mathis, ESAD. "Dairying in the 1970's," *The Dairy Situation*, DS-329.
3. Earle E. Gavett, FPED. Potential Mechanization in the Flue-Cured Tobacco Industry, With Emphasis on Human Resources Adjustments (speech at 23rd Tobacco Workers' Conference, University of Maryland, January 1970).
4. Ralph Spomer, Agricultural Research Service, Council Bluffs, Ia., and Paul Rosenberry, NRED, Ames, Iowa. Level Terraces on Loessial Cropland in Western Iowa—A Cost-Effectiveness Study (manuscript).
5. Wallace McMartin, NRED, and others, North Dakota Agricultural Experiment Station. *An Economic Analysis of Level Bench Systems for Forage Production in North Dakota*, CRR-14.\*
6. Wylie D. Goodsell and Daphene E. Tippet, FPED, and Robert G. Latimer, Rutgers Univ. Cost and Returns: Commercial Egg-Producing Farms, New Jersey, 1969 (manuscript).
7. W. Fred Woods, FPED. *The Tax Reform Act of 1969, Provisions of Significance to Farmers*, ERS 441.
8. V. Harrison, C. Langbehn, and L. M. Eisgruber, FPED and Purdue University. Capital Accumulation and Resource Adjustments on Indiana Farms (special material).
9. John C. Crecink, EDD. Rural Industrialization in Mississippi: Case Study of a Tissue Paper Mill at Pickens, Miss. (manuscript).
10. E. S. Micka, R. N. Krofta, FPED. Economic Impacts of a Changing Labor Force in Aroostook County, Maine (manuscript).
11. Ronald J. Glass, NRED, and Richard Gsottschneider, New Hampshire Agricultural Experiment Station. Inventory of Water-Based Recreational Enterprises in the Connecticut River Basin (manuscript).
12. Gordon R. Sloggett, NRED. Irrigation from Upstream Watershed Detention Reservoirs in Oklahoma (manuscript).
13. Nelson L. Le Ray, EDD. Agriculture: A New Use for Forest Land, New Hampshire Cooperative Extension Service, N.H. Agri. Exp. Sta., *Dairy Briefs*, Vol. 15, No. 3, May-June, 1970.
14. Stanley W. Voelker, EDD, and Thomas K. Ostenson, North Dakota State University. *Rural-Urban Quality Differentials in North Dakota's Public School System*, N. Dak. Agri. Exp. Sta. Rpt. No. 67.\*
15. Walter E. Sellers, Jr., FPED Availability and Cost of Farm Labor Historical and Current (speech at Maryland Farm Manpower Forum, Feb. 25, 1970).
16. Patrick P. Boles and John O. Gerald, MED. Price and Structure of Freight Car Ownership (manuscript).
17. N. A. Wynn, Jr., and Donn A. Reimund, MED. *Cost of Storing and Handling Farmers' Stock Peanuts in Commercial Facilities*, 1969, ERS-352.
18. William H. Scofield, MED. "The Agribusiness Complex" (speech at the American Society of Farm Managers and Rural Appraisers, Chicago, Illinois, Dec. 1, 1969).
19. Duane A. Smith, MED. The Changing Egg Production-Marketing Picture (speech at meeting of Connecticut Poultry Association, Manchester, Conn., Dec. 4, 1969).
20. George B. Rogers, MED. "Pricing Systems and Agricultural Marketing Research," *Agricultural Economics Research*, January 1970, Vol. 22, No. 1.
21. Marguerite C. Burke, University of Minnesota. Food Expenditures by Upper Income Families, Minn. Agr. Expt. Station, Tech. Bull. 269.\*
22. *National Food Situation*, NRS 131, February 1970.
23. Don Phillips, FRAD. The Impact of the Common Agricultural Policy on the Consumer (special material).
24. Geraldine Abbot, FRAD. *Japan's Commodity Market: A View of U.S.-Australian Competition*, ERS-For. 289.
25. Marion R. Larsen, FDTD. *The Agricultural Situation in Communist Areas*, ERS-For. 292.
26. John B. Parker, FRAD. India's Growing Exports of Mango Products (special material).
27. Kermit Bird, MED. (Special material).

NOTE: Unless otherwise indicated, authors are on the staff of the Economic Research Service (ERS) with their divisions designated as follows: Economic and Statistical Analysis Division (ESAD); Economic Development Division (EDD); Farm Production Economics Division (FPED); Foreign Development (FDTD); Foreign Regional Analysis Division (FRAD); Marketing Economics Division (MED); and Natural Resource Economics Division (NRED).



# ECONOMIC TRENDS

Item	Unit or Based Period	'57-'59 Average	1969		1970		
			Year	March	January	February	March
Prices:							
Prices received by formers	1910-14=100	242	277	271	287	290	289
Crops	1910-14=100	223	224	228	218	221	221
Livestock and products	1910-14=100	258	322	308	346	349	347
Prices paid, interest, taxes and wage rates	1910-14=100	293	373	369	383	386	386
Family living items	1910-14=100	286	351	347	360	362	363
Production items	1910-14=100	262	304	302	309	312	312
Parity ratio	1910-14=100	83	74	73	75	75	75
Wholesale prices, all commodities	1957-59=100	—	113.0	111.7	116.0	116.4	116.6
Industrial commodities	1957-59=100	—	112.7	112.0	115.1	115.5	115.8
Farm products	1957-59=100	—	108.5	106.5	112.5	113.7	114.3
Processed foods and feeds	1957-59=100	—	119.8	116.4	125.1	125.2	124.9
Consumer price index, all items	1957-59=100	—	127.7	125.6	131.8	132.5	—
Food	1957-59=100	—	125.5	122.4	130.7	131.5	—
Farm Food Market Basket: <sup>1</sup>							
Retail cost	Dollars	983	1,173	1,141	1,223	1,225	—
Farm value	Dollars	388	477	461	501	508	—
Form-retail spread	Dollars	595	696	680	722	717	—
Formers' share of retail cost	Percent	39	41	40	41	41	—
Farm Income: <sup>2</sup>							
Volume of farm marketings	1957-59=100	—	127	96	133	99	98
Cash receipts from farm marketings	Million Dollars	32,247	47,431	3,117	4,186	3,349	3,400
Crops	Million Dollars	13,766	18,939	935	1,635	1,028	900
Livestock and products	Million Dollars	18,481	28,492	2,182	2,551	2,321	2,500
Realized gross income <sup>3</sup>	Billion Dollars	—	54.6	52.9	—	—	56.0
Farm production expenses <sup>3</sup>	Billion Dollars	—	38.6	37.9	—	—	39.7
Realized net income <sup>3</sup>	Billion Dollars	—	16.0	15.0	—	—	16.3
Agricultural Trade:							
Agricultural exports	Million Dollars	4,105	6,228	517	515.3	550.5	—
Agricultural imports	Million Dollars	3,977	5,024	475	480.1	448.8	—
Land Values:							
Average value per acre	1957-59=100	—	<sup>1</sup> 183	179	<sup>6</sup> 183	<sup>6</sup> 183	—
Total value of farm real estate	Billion Dollars	—	<sup>5</sup> 207.3	202.6	<sup>6</sup> 207.3	<sup>6</sup> 207.3	—
Gross National Product: <sup>3</sup>							
Consumption	Billion Dollars	457.3	932.1	908.7	—	—	960.4
Investment	Billion Dollars	294.2	576.0	562.0	—	—	600.6
Government expenditures	Billion Dollars	68.0	139.4	135.2	—	—	137.3
Net exports	Billion Dollars	92.4	214.6	210.0	—	—	218.8
Income and Spending: <sup>4</sup>							
Personal income, annual rate	Billion Dollars	27.	2.1	1.5	—	—	3.7
Total retail sales, monthly rate	Billion Dollars	365.3	747.2	730.7	774.5	778.5	782.6
Retail sales of food groups, monthly rate	Million Dollars	17,098	29,303	28,881	29,304	29,418	—
Employment and Wages: <sup>4</sup>							
Total civilian employment	Millions	4,160	6,322	6,249	6,606	—	—
Agricultural	Millions	63.9	77.9	77.7	79.0	78.8	79.1
Rate of unemployment	Percent	5.7	3.6	3.7	3.4	3.5	3.6
Workweek in manufacturing	Hours	5.8	3.5	3.4	3.9	4.2	4.4
Hourly earnings in manufacturing, unadjusted	Dollars	39.8	40.6	40.7	40.1	39.8	40.0
Industrial Production: <sup>4</sup>							
Manufacturers' Shipments and Inventories: <sup>4</sup>	1957-59=100	—	173	171	170	170	170
Total shipments, monthly rate	Million Dollars	28,745	54,611	53,078	55,097	55,512	—
Total inventories, book value end of month	Million Dollars	51,549	95,905	90,317	96,062	96,703	—
Total new orders, monthly rate	Million Dollars	28,365	54,815	53,283	53,868	54,749	—
<sup>1</sup> Average annual quantities of farm food products							

<sup>1</sup> Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1959-61—estimated monthly. <sup>2</sup> Annual and quarterly data are on 50-State basis. <sup>3</sup> Annual rates seasonally adjusted fourth quarter. <sup>4</sup> Seasonally adjusted. <sup>5</sup> As of Nov. 1, 1969. <sup>6</sup> As of Nov. 1, 1969.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).



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### What's Chutney?

Chutney is a spiced, minced, sweet-and-sour jam that no respectable curry eater would be without. And mangoes are as closely allied to chutney as oranges are to marmalade.

In both cases, the bigger the mango hunks or larger the orange peel strips, the better the quality of the jam in the eyes and taste buds of trader and client.

The origins of "chatni" are buried in the history of Hindustani kitchens, but India has long preserved the recipe in principle and purveyed the concoction.

Today's commercially marketed "genuine" chutney is supposed to consist of many, if not all, of the following ingredients:

Mangoes, vinegar, sugar, lime and lemon juice, raisins, tamarind pulp or concentrate, onions, fried apples, cucumbers, tomatoes, beet juices, garlic salt, chilis, nutmeg, mustard, cayenne pepper, and other spices.

Sales of mango chutney aren't soaring, nor even very sizeable. But trade circles say they are steady, year in and year out.

A well stocked condiment counter probably carries at least six different brands. Brand names usually connote Indian aristocracy or honor Britishers like Col. C. or Maj. G., who presumably went in for cooking when they retired from military service in India.

Most chutney brands sold in the U.S. are imported—directly from India or via the U.K. However, there is one relatively large U.S. chutney manufacturer. The fresh mangoes needed for this commercial U.S.-made chutney are imported from Jamaica. (27)

## THE FARM INDEX

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